

**REMARKS**

Claims 1-34 are pending in this application. Claims 35-38 were previously withdrawn from consideration as being drawn to a non-elected invention and are currently cancelled in this response. The undersigned retains the right to file a divisional application regarding the subject matter of claims 35-38.

Claims 1-3, 6-14, 17-28 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,864,641 to Murphy et al (“Murphy”) in view of U.S. Patent Number 4,844,613 to Batchelder et al. (Batchelder”), U.S. Patent Number 5,377,008 to Ridgway et al. (“Ridgway”), and U.S. Patent No. 6,493,090 to Lading (“Lading”) (collectively, Murphy, Batchelder, Ridgway, and Lading are “the cited references”). Claims 4-5, 15-16 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,864,641 to Murphy et al (“Murphy”) in view of U.S. Patent Number 4,844,613 to Batchelder (“Batchelder”), U.S. Patent Number 5,377,008 to Ridgway et al (“Ridgway”), and U.S. Patent No. 6,493,090 to Lading (“Lading”) as applied to the claims above, and further in view of the “acknowledged prior art on page 23, paragraph [0083].” As stated in the introduction to this response, the undersigned believes this Action is non-final since the Office applied newly cited art in the rejection unprompted by any amendments to the claims. See MPEP 706.07(a). Specifically, U.S. Patent No. 4,844,613 to Batchelder and U.S. Patent No. 6,493,090 to Lading et al. are newly cited and were not cited by the Applicant in an IDS. The undersigned respectfully requests that finality be withdrawn and that the present response be treated as a response to a non-final Office Action.

In view of the remarks presented herein, the undersigned respectfully traverses these rejections as set forth below.

**Rejection of Claims 1-3, 6-14, 17-28 and 30-34 Under 35 U.S.C. §103(a)**

Claims 1-3, 6-14, 17-28 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy in view of Batchelder, Ridgway, and Lading.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) MPEP §2142.

The Office Action has failed to meet the burden of establishing a *prima facie* case for obviousness. The Office has failed to show some suggestion or motivation to combine the cited references.

First, while the references cited by the Office each describe a type of detection system, the references do not provide any motivation for the combination of the references that would render the claims of the present application obvious. For example, Batchelder, as the title suggests, describes an optical surface plasmon sensor device. In Batchelder, “[a]n optical device uses surface plasmon resonance to detect the presence of a specific material.” (Batchelder, Abstract). This process is known in the art to have some significant functional limitations. Some exemplary limitations were noted in the present application. For instance, paragraph 0006 of the present application explicitly rejects this type of detector stating:

Several detectors are based on a change of index of refraction. One such sensor is based on surface plasmon resonance. Surface plasmon techniques are difficult to

integrate for multiplexed operation where multiple target agents can be monitored simultaneously. Also, their sensitivity cannot be engineered by sharpening the spectral or angular response to light.

The fact that the present application specifically acknowledged the type of sensor system taught in Batchelder and went on to recognize its inability to address the specific problems that the present application attempts to solve (e.g. monitor the presence of multiple hazardous biological agents in the environment), suggests that combining the teachings of Batchelder would not have been an obvious combination for one skilled in the art. In fact, teaching the use of a surface plasmon sensor device as described in Batchelder teaches away from the detection method described in the present application. As a further example of how the known limitations of the Batchelder detector are counter-productive in achieving the objectives of the present application, Murphy, teaching a different type of optical sensing configuration, also dismisses the use of plasmon sensor devices. Column 1, lines 14-21 of Murphy provides:

Current optical sensing approaches for biological and chemical measurements are based on fluorescence and surface plasmon resonance (SPR) techniques. However, these techniques have been found to be cumbersome and lack in sensitivity. In addition, these approaches fail to account for measuring certain physical and electrical changes which may be occurring in the system.

Again, this passage suggests that it would not have been obvious to one skilled in the art to combine the teachings of Murphy with those of Batchelder. In fact, in describing the SPR technique, Murphy acknowledges the impracticality and difficulty involved in making an SPR device sufficiently “rugged” to be accurately maintained in a field environment. (See Murphy, col. 1, ll. 49-53). Thus, Murphy’s description of a Batchelder-type sensor also supports the assertion that the Batchelder system teaches away from providing the “compact, inexpensive, rugged and portable” sensor that is an object of the present application. [0013]. Therefore, based on the acknowledged structural limitations of the surface plasmon detection technique described

in Batchelder, a person skilled in the art would not have been motivated to combine the teachings of Batchelder with those of Murphy in rendering the present claims obvious. Similarly, neither Lading nor Ridgway provide the necessary motivation or suggestion to combine the teachings of the four references.

Again, the Office has not shown a suggestion or motivation to combine the references used to reject the present claims. Therefore, it appears that the Office has used the current specification as a “blue print,” constituting the use of improper hindsight, in combining the cited references. Accordingly, the Office has failed to show a suggestion or motivation to combine all of the references to teach the claims of the present application as required when making an obviousness rejection. As such, it is respectfully requested that the rejection of claims 1-3, 6-14, 17-28 and 30-34 under 35 U.S.C. §103(a) be reconsidered and withdrawn.

**Rejection of Claims 4-5, 15-16 and 29 Under 35 U.S.C. §103(a)**

Claims 4-5, 15-16 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,864,641 to Murphy et al (“Murphy”) in view of U.S. Patent Number 4,844,613 to Batchelder (“Batchelder”), U.S. Patent Number 5,377,008 to Ridgway et al (“Ridgway”), and U.S. Patent No. 6,493,090 to Lading et al. (“Lading”), and further in view of “acknowledged prior art on page 23, paragraph [0083].” Since claims 4-5, 15-16 and 29 are dependent on independent claims 1, 10, and 20 as addressed in the preceding section, the Office has similarly failed to meet its burden of with respect to claim 4-5, 15-16 and 29. Given this shortcoming, it is respectfully requested that the rejection of claims 4-5, 15-16 and 29 under 35 U.S.C. §103(a) be reconsidered and withdrawn.

**CONCLUSION**

The undersigned believes that claims 1-34 are allowable over the cited prior art and respectfully requests a notice of allowance to this effect. Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is encouraged to telephone the undersigned representative at the number listed below. In addition, if any additional fees are required in connection with the filing of this response, the Commissioner is hereby authorized to charge the same to Deposit Account No. 501458.

Respectfully submitted,

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